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10/759,112	01/20/2004	Ernst Affeldt	038741.53144US	6929
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EXAMINER				
DESIR, PIERRE LOUIS				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/759,112

**Applicant(s)**

AFFELDT ET AL.

**Examiner**

PIERRE-LOUIS DESIR

**Art Unit**

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 12/10/2007 have been fully considered but they are not persuasive.

Applicants argue that the requested load recited I claim 1 refers to the software load for an interface standard. In contrast, continue applicants, the resource in the Auckland reference refers to resource needed for a new call.

Examiner respectfully disagrees with Applicants while reminding Applicants that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. In this case, Auckland discloses a system wherein a base station scanning (i.e., monitoring) channel to identify new request for resources from subscriber unit (see figs. 20 and 23, paragraphs 170, 174, 187, and 188). As known the art, a requested resource from a mobile station does have a corresponding air interface (see paragraphs 190-191).

Also, Examiner wants to remind applicants that broadly written claims are broadly interpreted by examiner.

Applicants additionally argue that the signal processor recited in claim 1 can be reconfigured to accommodate one or more air interface standards. On the other hand the frequency roaming controller in Auckland can only select one of the frequencies or air interface standards that have been pre-installed in the base station.

Examiner respectfully disagrees. Auckland discloses that as conditions change (i.e., dynamic), the optimal forward or reverse channel may change, and additional channel identifying information may be communicated from the base station to the subscriber unit. For

example, if the required data rate of the subscriber unit changes, a new, higher data rate channel may be assigned, which may involve selecting a different error interface standard, a different frequency band for communication, etc (see figs. 20 and 23, paragraphs 174, and 190-191). As can be seen, this disclosure reads on the claim as written, i.e., dynamic reconfiguration. Also, let's assume that in Auckland that the frequency roaming controller can only select one of the frequencies or air interface standards that have been pre-installed in the base station. Selecting one of the pre-installed frequencies or air interface standard is done or reconfigured dynamically as condition change.

*Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-8, 10-23 are rejected under 35 U.S.C. 102(a) as being anticipated by Auckland et al. (Auckland), Pub. No. US 20030078037.

Regarding claim 1, Auckland discloses, for use in a wireless network, a dynamically reconfigurable base station node, comprising a radio frequency (RF) monitor operable to monitor traffic associated with a plurality of wireless communication devices to determine at least one requested load having a corresponding air interface standard (i.e., a request for resources is initiated. The request is communicated to **a base station** of the system. The base station may be the closest base station, one with the best available signal quality, or one specifically operated for

negotiation of resources for calls with subscribers. The request may be initiated in any suitable format. For example, the subscriber unit may identify a communication initiation channel, defined by predetermined timing and frequency parameters, and communicate the request for resources on the identified channel. **The base station may be continually scanning the channel to identify new request for resources** from the subscriber unit) (see figs. 20 and 23, paragraphs 170, 174, 187, and 188); and at least one signal processor coupled to the RF monitor (i.e., see figs. 20, items 2004 and 2002), the at least one signal processor operable to be dynamically reconfigured to support the air interface standard corresponding to the requested load (i.e., the baseband section 2004 includes a frequency roaming coordination controller 2026 and infrastructure authentication registration and session management controller 2028 and customization data 2030. The controller 2026 provides control signals and data necessary to customize the RF to IF section 2002 for communication at a specified frequency or frequency band and in accordance with a specified air interface standard. The controller 2028 receives information indicating the selected frequency band and air interface standard for communication with a particular subscriber unit. Data defining the necessary operations for communicating with a subscriber unit in accordance with a variety of air interface standards is stored as the configuration data 2030. **As conditions change (i.e., dynamic), the optimal forward or reverse channel may change, and additional channel identifying information may be communicated from the base station to the subscriber unit. For example, if the required data rate of the subscriber unit changes, a new, higher data rate channel may be assigned, which may involve selecting a different error interface standard, a different frequency band for communication, etc)** (see figs. 20 and 23, paragraphs 174, and 190-191).

Regarding claim 2, Auckland discloses a base station node (see claim 1 rejection) wherein the RF monitor further operable to provide requested load information to a load manager, the requested load information identifying the at least one requested load (i.e., the baseband section 2004 includes a frequency roaming coordination controller 2026 and infrastructure authentication registration and session management controller 2028 and customization data 2030. The controller 2026 provides control signals and data necessary to customize the RF to IF section 2002 for communication at a specified frequency or frequency band and in accordance with a specified air interface standard. The controller 2028 receives information indicating the selected frequency band and air interface standard for communication with a particular subscriber unit) (see figs. 20 and 23, paragraph 174).

Regarding claim 3, Auckland discloses a base station (see claim 1 rejection) the RF monitor further operable to determine at least two requested loads, each requested load having a unique corresponding air interface standard (i.e., the controller 2028 receives information indicating the selected frequency band and air interface standard for communication with a particular subscriber unit. Thus the controller is operable to determine selected frequency as related to a particular subscriber unit (more than one subscriber unit)) (see figs. 20 and 23, paragraphs 161 and 190-191).

Regarding claim 4, Auckland discloses a base station node (see claim 1 rejection) the at least one signal processor comprising one of an intermediate frequency (IF) processor and a baseband processor (see fig. 20, items 2004 and 2002).

Regarding claim 5, Auckland discloses a base station node (see claim 1 rejection) wherein the at least one signal processor comprising an intermediate frequency (IF) processor

and a baseband processor (see fig. 20, items 2004 and 2002).

Regarding claim 6, Auckland discloses a wireless network comprising a plurality of wireless communication devices (i.e., subscriber units) (see paragraph 161), the wireless network comprising: at least one dynamically reconfigurable base station node (see figs. 20 and 23, paragraphs 174, and 190-191), comprising a radio frequency (RF) monitor operable to monitor traffic associated with the wireless communication devices to determine at least one requested load having a corresponding air interface standard (i.e., a request for resources is initiated. The request is communicated to a **base station** of the system. The base station may be the closest base station, one with the best available signal quality, or one specifically operated for negotiation of resources for calls with subscribers. The request may be initiated in any suitable format. For example, the subscriber unit may identify a communication initiation channel, defined by predetermined timing and frequency parameters, and communicate the request for resources on the identified channel. **The base station may be continually scanning the channel to identify new request for resources** from the subscriber unit) (see figs. 20 and 23, paragraphs 170, 174, 187, and 188), and at least one signal processor coupled to the RF monitor (i.e., see figs. 20, items 2004 and 2002), the at least one signal processor operable to be dynamically reconfigured to support the air interface standard corresponding to the requested load (i.e., the baseband section 2004 includes a frequency roaming coordination controller 2026 and infrastructure authentication registration and session management controller 2028 and customization data 2030. The controller 2026 provides control signals and data necessary to customize the RF to IF section 2002 for communication at a specified frequency or frequency band and in accordance with a specified air interface standard. The controller 2028 receives

information indicating the selected frequency band and air interface standard for communication with a particular subscriber unit. Data defining the necessary operations for communicating with a subscriber unit in accordance with a variety of air interface standards is stored as the configuration data 2030. **As conditions change (i.e., dynamic), the optimal forward or reverse channel may change, and additional channel identifying information may be communicated from the base station to the subscriber unit. For example, if the required data rate of the subscriber unit changes, a new, higher data rate channel may be assigned, which may involve selecting a different error interface standard, a different frequency band for communication, etc** (see figs. 20 and 23, paragraphs 174, and 190-191); and a load manager operable to communicate with the base station node, the RF monitor further operable to provide requested load information to the load manager, the requested load information identifying the at least one requested load, the load manager further operable to dynamically reconfigure the base station node based on the requested load information (see figs. 20 and 23, paragraphs 174, and 190-191).

Regarding claim 7, Auckland discloses a wireless network (see claim 6 rejection) further comprising a load server and an element manager, the load manager located in one of the load server, the base station node and the element manager (i.e., the baseband section 2004 includes **a frequency roaming coordination controller 2026 and infrastructure authentication registration and session management controller 2028** and **customization data 2030**). The controller 2026 provides control signals and data necessary to customize the RF to IF section 2002 for communication at a specified frequency or frequency band and in accordance with a specified air interface standard. The controller 2028 receives information indicating the selected



frequency band and air interface standard for communication with a particular subscriber unit. Data defining the necessary operations for communicating with a subscriber unit in accordance with a variety of air interface standards is stored as the configuration data 2030) (see fig. 20, paragraph 174).

Regarding claim 8, Auckland discloses a wireless network (see claim 7 rejection) wherein the load manager further operable to select which one or more loads to provide to the base station node based on the requested load information and to notify the load server of the selected loads (i.e., the baseband section 2004 includes **a frequency roaming coordination controller 2026** and **infrastructure authentication registration and session management controller 2028** and **customization data 2030**). The controller 2026 provides control signals and data necessary to customize the RF to IF section 2002 for communication at a specified frequency or frequency band and in accordance with a specified air interface standard. The controller 2028 receives information indicating the selected frequency band and air interface standard for communication with a particular subscriber unit. Data defining the necessary operations for communicating with a subscriber unit in accordance with a variety of air interface standards is stored as the configuration data 2030) (see fig. 20, paragraph 174)

Regarding claim 10, Auckland discloses a wireless network (see claim 6 rejection) wherein the RF monitor further operable to determine at least two requested loads, each requested load having a unique corresponding air interface standard (i.e., the controller 2028 receives information indicating the selected frequency band and air interface standard for communication with a particular subscriber unit. Thus the controller is operable to determine selected frequency as related to a particular subscriber unit (more than one subscriber unit)) (see

figs. 20 and 23, paragraphs 161 and 190-191).

Regarding claim 11, Auckland discloses a wireless network (see claim 6 rejection) wherein the at least one signal processor comprising one of an intermediate frequency (IF) processor and a baseband processor (see fig. 20, items 2004 and 2002).

Regarding claim 12, Auckland discloses a wireless network (see claim 6 rejection) wherein the at least one signal processor comprising an intermediate frequency (IF) processor and a baseband processor (see fig. 20, items 2004 and 2002).

Regarding claim 13, Auckland discloses a wireless network (see claim 6 rejection) further comprising at least two base station nodes (see base station 1), each of the base station nodes comprising at least one signal processor operable to be dynamically reconfigured to support the air interface standard corresponding to the requested load for that base station node such that each of the base station nodes is operable to support different air interface standards **As conditions change (i.e., dynamic), the optimal forward or reverse channel may change, and additional channel identifying information may be communicated from the base station to the subscriber unit. For example, if the required data rate of the subscriber unit changes, a new, higher data rate channel may be assigned, which may involve selecting a different error interface standard, a different frequency band for communication, etc** (see figs. 19-20 and 23, paragraphs 174, and 190-191).

Regarding claim 14, Auckland discloses for use in a wireless network comprising at least one dynamically reconfigurable base station node and a plurality of wireless communication devices (see figs. 19-20 and 23, paragraphs 174, and 190-191), a method for reconfiguring the base station node, the method comprising: monitoring traffic for the wireless communication

devices to determine requested loads, each requested load having a corresponding air interface standard (i.e., a request for resources is initiated. The request is communicated to a **base station** of the system. The base station may be the closest base station, one with the best available signal quality, or one specifically operated for negotiation of resources for calls with subscribers. The request may be initiated in any suitable format. For example, the subscriber unit may identify a communication initiation channel, defined by predetermined timing and frequency parameters, and communicate the request for resources on the identified channel. **The base station may be continually scanning the channel to identify new request for resources** from the subscriber unit) (see figs. 20 and 23, paragraphs 170, 174, 187, and 188); determining whether the requested loads are installed in the base station node and configuring the base station node with the requested loads by installing the requested loads in the base station node when the requested loads are not installed in the base station node (i.e., information about available resources of the various networks, such as network 1904, network 1906, may be stored at the controller 1908 at one or more mobile telephone switching centers, or at one or more base stations. Information not immediately available at a base station for initiating a radio link with subscriber unit 1902 may be accessed from elsewhere in the system 1900, since other networks are in communication with the controller 1908) (see paragraph 161. Also refer to fig. 20 and paragraph 174).

Regarding claim 15, Auckland discloses a method further comprising reporting the requested loads to a load manager (i.e., the baseband section 2004 includes a frequency roaming coordination controller 2026 and infrastructure authentication registration and session management controller 2028 and customization data 2030. The controller 2026 provides control signals and data necessary to customize the RF to IF section 2002 for communication at a

specified frequency or frequency band and in accordance with a specified air interface standard. The controller 2028 receives information indicating the selected frequency band and air interface standard for communication with a particular subscriber unit) (see figs. 20 and 23, paragraph 174).

Regarding claim 16, Auckland discloses a method wherein determining whether the requested loads are installed in the base station node comprising determining whether the requested loads are installed in the base station node in one of the base station node and a load manager (see figs. 20 and 23, paragraphs 161 and 174).

Regarding claim 17, Auckland discloses a method further comprising notifying a load server of the requested loads (see figs. 20 and 23, paragraphs 174, and 190-191).

Regarding claim 18, Auckland discloses a method further comprising providing service for the wireless communication devices using the air interface standards corresponding to the requested loads (see figs. 20 and 23, paragraphs 174, and 190-191).

Regarding claim 19, for use in a wireless network comprising a plurality of dynamically reconfigurable base station nodes and a plurality of wireless communication devices, a method for reconfiguring the base station nodes, the method comprising: receiving at least one of an updated and a new load, each received load having a corresponding air interface standard (i.e., request for resources) (see figs. 20 and 23, paragraphs 161, 174, and 190-191); determining whether any of the base station nodes are to be updated based on the received load (see paragraph 161. Also refer to fig. 20 and paragraphs 174, 190-191); and configuring the base station node with the received load by installing the received load in the base station node when the received load is not installed in the base station node (i.e., information about available

resources of the various networks, such as network 1904, network 1906, may be stored at the controller 1908 at one or more mobile telephone switching centers, or at one or more base stations. Information not immediately available at a base station for initiating a radio link with subscriber unit 1902 may be accessed from elsewhere in the system 1900, since other networks are in communication with the controller 1908) (see paragraph 161. Also refer to fig. 20 and paragraphs 174, 190-191).

Regarding claim 20, Auckland discloses a method (see claim 19 rejection) determining whether any of the base station nodes are to be updated based on the received loads comprising determining whether any of the base station nodes have a load installed corresponding to a received updated load (see paragraph 161. Also refer to fig. 20 and paragraphs 174, 190-191).

Regarding claim 21, Auckland discloses a method (see claim 19) determining whether any of the base station nodes are to be updated based on the received loads further comprising determining whether any of the base station nodes is to have a received new load installed (i.e., inherently, when a request for resources is received, a determination is made since if the information is not immediately available at a base station, the information will be accessed from elsewhere) (see paragraph 161).

Regarding claim 22, Auckland discloses a method (see claim 19 rejection) wherein determining whether any of the base station nodes are to be updated based on the received loads comprising determining whether any of the base station nodes are to be updated in one of the base station node and a load manager (see paragraphs 161, and 174).

Regarding claim 23, Auckland discloses a method (see claim 19 rejection) further

comprising providing service for the wireless communication devices using the air interface standard corresponding to the received load (see figs. 20 and 23, paragraphs 174 and 190-191).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Auckland in view of Kaminski et al. (Kaminski), Pub. No. US 20040116153.

Regarding claim 9, Auckland discloses a wireless network as described above (see claim 7 rejection).

Although Auckland discloses a network comprising a load server (see fig. 20, paragraph 174), Auckland does not specifically disclose a network further comprising a radio access network and a core network, the load server located in one of the radio access network and the core network.

However, Kaminski discloses a network further comprising a radio access network and a core network and load server (see abstract and fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by the cited references to arrive at the claimed

invention. A motivation for doing so would have been to provide an improved radio network controller and an improved node of a radio access network.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PIERRE-LOUIS DESIR whose telephone number is (571)272-7799. The examiner can normally be reached on Monday-Friday 9:00AM- 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Pierre-Louis Desir/  
Examiner, Art Unit 2617

/Joseph H. Feild/  
Supervisory Patent Examiner, Art Unit 2617



**Application Number****Application/Control No.**

10/759,112

**Applicant(s)/Patent under  
Reexamination**

AFFELDT ET AL.

**Examiner**

PIERRE-LOUIS DESIR

**Art Unit**

2617